The Simple Reality

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Infinity and Electromagnetism

The universe is infinite, eternal, and fractal. As a fractal, all systems within the universe function the same, but are observed differently due to their relative masses. As it is eternal, there was no beginning; the universe always is, was, and forever will be. And as infinite, in terms of physics this means there is infinite volume within the universe and the masses within the universe can be both infinitely large and infinitely small. By the force of gravity alone, these systems are manipulated into the universe as we see it, as shown in Equation (1). In terms of physics, all observations in the universe are the result of gravity, including the masses themselves.

(1) $\left(\frac{1}{\infty} \rightarrow \infty\right) + gravity = universe$

Electromagnetism is essentially what causes magnets to repel or attract. Electromagnetic fields such as shown in Figure 1 are the result of this force.



Figure 1: A typical electromagnetic field.

Presently, electromagnetism is considered to be a fundamental force of nature. "Fundamental forces" are said to be *causeless*; they are the mechanisms through which all that we observe is capable of manifesting. However, electromagnetism is not a fundamental force because *it is caused by gravity*.

Herein, all bodies in space are considered "particles". When two given particles have sufficiently large mass differences relative to one another, they can be termed "infinitesimal" and "infinite", though they themselves are perceivable as the opposite relative to even larger or even smaller particles.



Figure 2: Simple diagram of "infinitesimal" and "infinite" particle.

When an infinitesimal particle is sufficiently proximal to an infinite particle, then it cannot escape the force of gravity and is pulled back directly towards the center of gravity of the infinite particle, as shown in Figure 3.





Due to its relative size, it then travels physically *through* the center of gravity which causes the direction of the force to reverse and be in the opposite direction, as shown in Figure 4.



Figure 4: Orbital of infinitesimal after it passes through the infinite.

This then leads to the infinitesimal particle being again pulled back towards the center of gravity which produces a Figure-8 orbital, as shown in Figure 5.



Figure 5: Complete orbital of infinitesimal and infinite.

Due to the summation of the flow of all infinitesimal particles proximal to an infinite particle, the large-scale observation of electromagnetism is produced, as shown in Figure 6.



Figure 6: Electromagnetic field as also shown in Figure 1.

Thereby, gravity *causes* electromagnetism. This is why spin of a particle is closely tied to its electromagnetism; because the spinning mass of a system, about its center of gravity, produces curvature in the flow pattern of the infinitesimal particles which allows gravity to pull them back because they are not traveling directly away when spin exists.

From this fundamental description of how electromagnetism is produced by gravity, we can use the structure of the universe it verifies to determine how all observations in physics are produced therefrom.

The Big Bang Illusion

For a century, society has generally accepted that the universe began in a Big Bang and is finite in time and space. In reality, this is a misinterpretation of observations.

Each particle, such as carbon or hydrogen and so on, absorbs light at a very specific frequency. All other frequencies are not absorbed by a given mass, but they instead pass without being influenced observably, which leads to absorption lines in the light spectrum (top of Figure 7). Over sufficiently large distances, light from all distant galaxies in all directions has these absorption lines shifted towards the red spectrum in what is termed a redshift, as shown in Figure 7.





When we became technologically capable of looking deep into space, through improvements in telescopes that allowed us to see beyond our Milky Way galaxy, this is when we began to analyze the light spectrums of distant galaxies to determine their compositions. It was from this process that we then became aware that even though within the "local" universe there is a large dichotomy of redshift and blueshift, beyond a certain distance all galaxies, regardless of direction, had their absorption patterns shifted towards the red spectrum, leading to a mapping of galaxies alike to in Figure 8:



Figure 8: General pattern of blueshift and redshift versus distance.

This redshift, where there is a reduction in the energy of the light that affects where the absorption lines are seen, is observed in all directions. While light can also be blueshifted, where there is an *increase* in the energy of the light, no galaxies beyond a certain distance are observed to be blueshifted, alike to Figure 8. This anomalous observation was critical to the thought patterns used to conceptually construct the idea of the Big Bang. It was not until all distant redshifted galaxies in all directions was observed that the Big Bang was introduced as a feasible explanation of how the universe was formed.

Redshift and blueshift can occur by two separate mechanisms: gravitationally or by motion. Doppler shift, as shown in Figure 9, is due to motion: when *an object* is moving away from an observer, the wavelengths of light or sound from it are stretched into a redshift. When *an object* is moving towards an observer, the wavelengths of light or sound from it are alternatively compressed into a blueshift.



Figure 9: Doppler shift

Similarly, as shown in Figure 10, gravitational redshift is caused by *light* moving away from a source of gravity and gravitational blueshift is caused by *light* moving towards a source of gravity. *Gravitational shift has nothing to do with the motion of the object (a distant galaxy, in this case) itself.* Rather, when the light coming from that galaxy moves away from a source of gravity, the gravity tugs on the light and causes a redshift to occur while light moving towards a source of gravity is compressed into a blueshift.



Figure 10: Gravitational redshift and blueshift

When all distant redshifted galaxies was observed, Doppler shift was chosen as the *assumed* cause of the observation which meant that all galaxies were therefore moving away

from Earth. Due to this motion away, if we were to reverse time we could say then that every object was therefore together at one point and thereby there was a Big Bang.

As many galaxies were observed, the correlation of redshift per distance that all galaxies generally follow became known as "Hubble's Law,", as shown in Figure 11, even though it is not a law but rather an observed general pattern that only fits observations of more proximal galaxies.



Figure 11: Hubble's Law is the term used to describe the blue line representing a correlation of redshift* per distance of distant galaxies, which is produced from data of redshift of individual galaxies represented in the red markers. Notably, as done in this graph, it is standard to *subsequently translate* redshift into a galaxy's *velocity* (km/s) away from Earth due to the *assumption* of Doppler shift leading to this interpretation, where in reality it is caused by gravitational redshift and has nothing to do with velocity because of this.

Detrimental to the Big Bang concept, observations of redshift greater than the value of 1 were commonplace in very distant galaxies. If Doppler shift was maintained as the cause, then it meant that the galaxies were physically traveling faster than the speed of light. In order to account for the model seemingly breaking the laws of physics, Hubble's Law was *extracted* and explained away by a totally new concept that had never been heard before, thereby adding complexity: *"Expansion of Space"*. With this, objects were not moving faster than the speed of light but rather a completely new phenomenon was postulated, that the underlying space that all observable mass is within is *"expanding"*, pushing things apart in a way never observed until the assumption of Doppler shift necessitated it being interpreted to exist. Logic and Occam's Razor were disregarded in favor of patch working a flawed assumption.

As deeper space was more substantially able to be analyzed, we then observed that this redshift per distance correlation was not linear as Hubble's "Law" implied but rather grew to be exponential over larger distances, seeing redshifts as high as 7.5. Even with the introduction of a new concept, "*expansion of space*" was no longer sufficient to explain the redshift observations and the accelerating *rate* of redshift per distance was then given another new, never heard before explanation: *Dark energy*.

It is clear that the assumption of Doppler shift directly led to the added complexities of expansion of space and dark energy. The universe is not complicated fundamentally, but becomes complicated when a model is only an approximation of reality. The same can be said for any currently accepted model, from quantum physics to general relativity; they are not accurate explanations but rather are approximations that only fit a small range of the *infinite* universe.

From this, gravitational redshift based on the patterns of the universe must be fully considered. The universe is infinite and as such there is no end to how large objects can be within it relative to other objects. We see that the moon orbits Earth, which orbits the sun, which orbits the black hole at the center of the Milky Way. Logically, the Milky Way's central black hole therefore orbits another larger mass, which orbits another larger mass, and so on, infinitely. The question becomes how this structure produces all distant redshifted galaxies by gravitational redshift.

As the object that the Milky Way's black hole orbits would be to one side of the Earth, even if this was considered in the past as feasible, it was disregarded because it's gravitational shift would lead to a dichotomy of half the celestial sphere's galaxies having their light blueshifted as it moves towards the object to reach Earth and the other half having their light redshifted as it moves away from the object to reach Earth, and thereby would not produce all distant redshifted galaxies in all directions.

However, it is literally not as straightforward as this. Just as how gravity produces electromagnetism by pulling infinitesimal particles through the center of mass of a relatively infinite body, the object that the Milky Way galaxy orbits is so massive that it physically pulls all light in the observable universe back to it and through it into its electromagnetic field. This light then travels in a Figure-8 orbital, repeatedly, until it arrives at Earth after traveling, for example, for 14 billion years. We then assume the light has traveled straight to Earth, and create a cosmic mapping system based on this, as shown in Figure 12.



Figure 12: Orbit of light arriving at Earth.

As light travels through each loop of the Figure-8 orbital, it moves radially outward and inward the same exact distance and thereby the radial motion's shift is null. However, due to orbital motion to go from one side of the loop to the other, there is a cumulative redshift effect that manifests each time the particle again reaches the center of gravity, as shown in Figure 13. This then produces the observation known as Hubble's Law.





As light is redshifted, a given volume of blue light will have a specific mass, *m*, and that same exact mass will exist in redshifted light but it will be redistributed through a larger volume. This necessitates that the individual systems the light is composed of must reach a new steady-state. Thereby, even though the *total* mass remains, the individual particles of redshifted light are less massive than the individual particles of blueshifted light, as seen in Figure 14.

Blue light, total mass: mIndividual masses: m_1

> Red light, total mass: mIndividual masses: m_2 , where $m_2 < m_1$

Figure 14: Blue light mass *m* in a given volume and red light mass *m* stretched into larger volume.

As the mass of the object the Milky Way orbits remains essentially constant, its influence on the less massive particles of redshifted light is more substantial than its influence on more massive particles of blue light. This causes the physical size of the Figure-8 orbital of redshifted light to be smaller than the original size, as shown in Figure 15. In Figure 15, light from a distant galaxy starts most energetically and then as it goes through each loop of the Figure-8 it slowly diminishes through the electromagnetic spectrum as gravitational redshift influences the light across larger distances traveled.



Figure 15: Shrinking Figure-8 orbital of redshifting light per distance.

We can then look to the equation of gravity, Equation (2), to see why we observe the accelerating rate of redshift per distance in the light spectrum of distant galaxies:

(2)
$$F = G\left(\frac{m_1m_2}{r^2}\right)$$

The force of gravity is an *inverse of radius-squared*. Each loop of the Figure-8 is smaller as redshift occurs and thereby the force of gravity is *exponentially larger* due to this inverse of radius-squared correlation as the radius shrinks. Thereby, the observations of redshift in all distant galaxies as both "Hubble's Law" and as accelerating over distance are explainable without

the added complexities of expansion of space and dark energy because this is the mechanism through which it actually occurs.

The Principle of Correspondence

This infinite universe model necessitates that all systems must function the same. We are on an arbitrary level within the infinite dimensions of the universe. As we live on what we call Earth, and are composed of what we call atoms, we observe the adjacent levels of the universe as we do. As our atoms have the relative mass that they do, we require a certain mass of radiation in order for the temperature that we feel to be what we call livable. However, this is simply because of our building block, as shown in Figure 16.



Figure 16: Observed levels of the universe.

If we lived on another level of the universe, we would not be composed of what we call atoms. Rather, we would be composed of the largest building block *below that level*. We would still term that level our planet and would perceive adjacent levels *as we perceive our adjacent levels*, as shown in Figure 17. Our sufficient radiation would be a function of our largest building block and thus we would perceive the radiation from our "Sun" as being in the precise range that supports life. In this way, while we only see one, there are *octaves* of perceivable visible light, *R*-*O-Y-G-B-I-V*, just as there are octaves of musical notes, *A-B-C-D-E-F-G*. All light is perceivable as visible light when the mass of the observer's building blocks is the same relative mass ratio apart from the mass of the particles being perceived as visible light. So, if perceived light has a given mass, then the mass of the largest building block of the observer would have a specific mass ratio with it. Only this mass ratio would perceive that wavelength as visible light. If light has a *different* mass, for example x-ray or infrared light, then the mass of the observer who perceives it as visible

light would have the same mass *ratio* as the other observer, just larger or smaller building block mass to keep the same *ratio*. In this way, the dimensions of the universe manifest.



Figure 17: Above and below dimensions and their perceived levels of the universe.

To confirm this, we can look to different dimensions and see that they all function the same. For example, a "solar system" and a planetary system both are observable as *galaxies*. We can, therefore, look at *generalities* of the Earth system, our solar system, and exemplary galaxies for parallels to see that this is the case, as shown in Table 1.

Table 1:

Galaxy	Solar System	Earth system
Center of mass (Black hole)	Center of mass (Sun)	Center of mass (Earth)
Disc structure	Planets, asteroid belt, Kuiper Belt	Inner and outer Van Allen Belts
Galactic Halo	Oort Cloud	Gravitational equilibrium
Spiral arms	Heliospheric current sheet	Electromagnetic field and rotation

Table 1: Comparison of a galaxy to our solar system and the Earth system.

Each system comprises a center of mass. As we are composed of atoms, we observe black holes as gravitational anomalies from which no visible light escapes. The sun, which is less massive, is not able to bend particles of visible light back to itself and thereby it emits light in the visible light spectrum. A black hole is sufficiently massive that any visible light it emits is physically bent by the force of gravity back to it and through it such that no visible light from a black hole reaches Earth. This causes us to observe it as a singularity when in reality this is not the case. Just as a star cannot bend visible light it emits back in on itself, a black hole cannot bend x-ray light it emits back in on itself and thereby when we look at a black hole in the x-ray spectrum we observe its photosphere, as shown in Figure 18.



Figure 18: NASA M-81 image; located about 12 million light years away. In blue, Chandra X-ray Observatory X-ray data is shown.

Even less massive than both of these systems, the Earth is not able to produce visible light. Instead, it emits infrared radiation, which is simply less massive light particles. All light is infinitesimal particles, their mass is what then determines their frequency, and the object's mass absorbing that light determines which particles can be gravitationally influenced to it so as to produce its radiation. The Earth cannot influence as much mass as the sun can, and the sun cannot influence as much mass as a black hole can, and thus each emits different levels of radiation to its surroundings. Additionally, dependent on their masses, they influence specific wavelengths of light differently; smaller masses are pulled by gravity back towards the center of mass while larger masses are able to escape the force of gravity and thereby do not function as part of the electromagnetic field but rather as light perceivable by distant observers.

Each system comprises a disc structure. The disc of a galaxy generally forms in a single plane about the center of a galaxy. Just the same, the planets, asteroid belt, and Kuiper belt generally form in a single plane about the sun. The Kuiper Belt, which is much more extensive, would be especially perceivable as the disc structure of the galaxy that is our solar system, alike to the disc of a galaxy as shown in Figure 19.



Figure 19: Disc of galaxy.

The Earth's disc structure is called the Inner and Outer Van Allen Belts, shown in Figure 20 below. These disc structures of electrons are equivalent to the asteroid belt and the Kuiper Belt, and would also be perceived as the disc structure of the galaxy that is our Earth system.



Figure 20: Inner and Outer Van Allen Belts around Earth.

Additionally, each galaxy has a galactic halo, a sphere of dark matter about the galaxy. This halo is recognized due to its gravitational effects on the spin rate of the disc structure of galaxies. Dark matter, which is hypothesized, is real and is the infinitesimal masses that make up the *ether*, flowing in each body's electromagnetic field. Just the same, the solar system is said to have the Oort Cloud, a sphere of matter surrounding the solar system. Gravitational equilibrium would necessitate that this exists in both the solar system and in the Earth system. As we compare smaller systems, the perceived comparisons are not all directly observed but can be concluded based off consideration of gravity.

Some galaxies have their disc structure manipulated in a manner where there are spiral arms. Due to the sun's rotation and electromagnetic field, the turning of the field with the sun's rotation produces what is known as the heliospheric current sheet, as depicted in Figure 21.



Figure 21: Heliospheric current sheet of the sun.

Due to this flow of mass, it causes the systems of the asteroid and Kuiper belts to be manipulated so as to produce spiral arms of the disc structure of the galaxy that is our solar system. From these parallels, and the model's simple explanation of electromagnetism and redshifted observations as a result of gravity, we can see that our solar system is observably a galaxy.

Just the same, as the Earth rotates, its electromagnetic field would also produce the equivalent of a heliospheric current sheet. This then causes the Inner and Outer Van Allen Belts to be manipulated so as to produce the spiral arms of the disc structure of the galaxy that is our Earth system. Once more, we can see that our Earth system is therefore observably a galaxy.

Due to the recognition of this pattern of three adjacent levels functioning equivalently, we can see that this pattern logically continues into all other levels of the universe and thus fundamental principles of how the microcosmic and macrocosmic systems function can be deduced without approximation, since we need only look to systems we can observe to conclude parallels of systems we cannot observe. The more we do this, the more we see that those systems, too, match the infinite structure.

This pattern indicates that electrons function like stars. At night, when the mass emitted by the sun does not reach the atoms of our surroundings, then the electrons are unable to emit

sufficient radiation so as to produce visible light that we then see as the colorful world we live in. Night goggles, though, function using infrared light, and we are then able to see our surroundings because at night the ambient radiation of the atoms is sufficient so that they produce infrared light radiation.

During the day, the mass emitted by the sun reaches the atoms of our surroundings, the electrons absorb this mass and then, like a star syphoning material off another star, they grow in mass. This process, due to their relative size, does not slowly occur but rather is observably instantaneous. When the electron's mass increases, just like a star, it reaches a critical mass where it is no longer stable and it supernovas, which is when an electron is considered to be excited. Stable once more, but still being radiated, it then absorbs mass again and supernovas, rapidly vibrating between stability and instability, emitting their portion of the visible light we observe from surroundings. Just like a supernova, which emits more light than the entire galaxy it is part of when it occurs, electrons are able to emit visible light by this function when they do not typically. Each electron's specific mass is not identical, just like the planets of the solar system are not the same. Rather, their mass is based off their surroundings and thus when they supernova they emit a varying range of visible light, thereby producing the specific colors of each component of reality we see around us. If there is not enough energy, this will produce a vibrating, speckled, low "frame-rate" image of reality, such as a dimly lit white wall. Alternatively, if there is enough energy, then the vibrating will occur rapidly enough that a high "frame-rate" is achieved and a flowing, uninterrupted depiction of our surroundings is produced.

The nucleus of the atom, too, experiences this energy fluctuation. However, the radiation from the sun is insufficient to produce supernova cycling and thus each atom remains largely stable over time.

As atoms become more massive, their half-life generally decreases. The heaviest atoms are the least stable and thus are considered "radioactive" in nature. Their mass is so high that they pull much more additional proximal mass into them due to their gravity than less massive atoms. Additionally, electromagnetic elements pull in even more mass due to their spin, both of which lead to increased rate of change. When a radioactive element decays, it, too, supernovas. As this is the more massive nucleus of an atom, the particles it emits are more massive than those emitted by the supernova of an electron. Thus, rather than beneficially producing a picture of reality to the observer, it emits damaging radiation because the mass of the particles is higher so when they come into contact with the specific mass of the atoms of our cells they function alike to comets bombarding a planet rather than alike to the sun's radiation providing for the planet. This leads to death of cells as the atoms are transformed and no longer function in a life supporting manner.

The Double-Slit Experiment Explained

In a widely referenced experiment known as the Double-slit experiment, light is radiated through two adjacent slits in a material. The light going through each slit becomes a wave that

then arrives at a screen where the effects are observed. As each interacts with one another, they produce an interference pattern, as shown in Figure 22.



Figure 22: Interference pattern of double-slit experiment.

Quantum mechanics draws its basis largely from this experiment. When we attempt to "observe" which slit a photon travels through, we see that it collapses the wave function's interference pattern into a particulate pattern where particles only arrive in two separate areas, as shown in Figure 23.



Figure 23: "Observer" effect of double-slit experiment.

Notably, when a photon's positioning is observed, we must radiate energy into it so as to cause it to become excited and, as we see from above, supernova to release radiation which allows for determining the positioning of the photon. In so doing, we are not simply watching the experiment but we are directly influencing it with this influx of mass into the system.

Just like every other observation in physics, this experiment finds a fundamental explanation from gravity. When a slit is sufficiently small in diameter, it produces a system such that any particles that travel down the exact center have a balanced force of local gravity from the *atomic composition of the slit*, but any particles that travel towards any of the sides of the slit will be gravitationally lensed by the atomic weight of the atoms it passes. Light is observably a wave because the infinitesimal particles flow together in a wave function. In this way, light is particles which manifest as a wave alike to a wave in the ocean being composed of particles.

When the material of the slit is adjusted and all other variables remain the same, the deflection of the particles of light changes as a function of the atomic weight of the slit material, showing that the wave produced by each slit is caused by gravity.

This is why the single-photon double-slit experiment, where individual photons are transmitted through the double-slit design one at a time, produces the wave function's interference pattern. As they travel through the slit, they slowly accumulate into a summation that is observable as a wave due to their varying proximity to the slit walls as each passes through the system.

The Simple Reality

Reality is not probabilistic as quantum mechanics suggests. Alike to the Big Bang, this is a misinterpretation of the observations. Rather, it is deterministic, based on the force of gravity and the laws of motion on each of the infinite particles of the universe. As reality is created through gravity, it is done so with exactness and certainty rather than uncertain probabilistic ways. As we analyze smaller and smaller systems, their time dilation and our finite ability to accurately measure characteristics causes us to drastically misinterpret their functionality; in reality, they function identically to the macrocosm and the more observations that are considered with this in mind the more clear it becomes that this is the fundamental truth of reality.

If we were to zoom in on a relative infinitesimal particle, it, too, could be observed as an infinite particle, divisible always into smaller particles, all of which are held together by the force of gravity. In this, reality is composed only of gravity. From one unchanging Law, all that exists is *created*. From a physics standpoint, there is nothing but gravity. Demonstrably, all is one and one is all.

In this regard, starting from a foundational ground-up approach, science is able to meet religion at the center and bring clarity to reality. Like building a house, only when we start from the ground up can the house stand. The universe is demonstrably and literally *created* by gravity. Whether gravity is the end of the line or is, rather, the mechanism through which God manifests the universe, is only then determinable by looking if there is Consciousness behind all things. Undoubtedly, there is an order and structure to the universe that is clear from physics and science. However, this is assumed to not immediately indicate an Intelligent Designer. If there is a God, though, that God is definitively Unlimited, the manifestation of *Infinity*. This means that there is no end to what that God is, and therefore each and every one of us is God, as well as all things. We could listen to God by listening to the messages in all things through the hypothesis that if there is a Conscious God, Creator of All Things, that God would communicate with an individual using all of its "body language"; the circumstances of events we each encounter in our lives. And this is precisely how the universe functions, for God is Reality. We need only to earnestly look and thereby we inevitably will see conscious communication from God in everything because it is the Simple Reality.